1. Purpose and Scope

This procedure describes the method for identifying, reporting, correcting, and verifying the resolution of problems and the disposition of material nonconformances using the computerized National Ignition Facility (NIF) Problem Identification and Correction System (NIF-PICS) database.

This procedure applies to problems that impact NIF Project activities; documentation; processes; systems, structures & components (SSCs) undergoing in-process inspection; acceptance or operational testing,[1] and supplier nonconformances submitted for NIF-LLNL disposition. This procedure does not apply to those material or equipment nonconformances identified and reported using either the Beampath Infrastructure System (BIS)-Nonconformance Report (NCR) process[2] or the Optics Metrology Data Management System (MDMS) system. Likewise, requested changes and corrections to the Integrated Computer Control System (ICCS) software are identified and managed using their internal Software Change Request (SCR)Track system.

2. Definitions

Contributory Cause—Contributory cause(s) are those events or conditions that were not directly responsible for a problem, but whose existence complicated the problem or made the consequences more severe.

Deviation Request—An authorized departure from definition, fabrication, process, or construction requirements identified prior to undertaking the work.

Direct Cause—The proximate reason or factor that directly resulted in the problem or nonconforming item.

Disposition—Action authorized to deal with an existing nonconforming item to resolve the nonconformance.

Metrology Data Management System (MDMS)—The relational database used by the Project to store optical product inspection data by part number and serial number and also to record the disposition of nonconforming optical material. The system is maintained by the Engineering Services organization.

Nonconforming Item—Any system, structure, component, or product, including material, hardware, software, or equipment that has deficient characteristics or documentation.

Performing Organization—The organizational entity (project or supplier) responsible for performing the material disposition actions or for implementing the corrective actions identified in a problem report.

Preventive Corrective Action—Action(s) implemented to eliminate the cause of a problem and prevent its recurrence. Preventive actions must address root and contributing causes.

Problem—A condition that renders an item or activity unacceptable or indeterminate or that could negatively impact an item or activity if uncorrected (including adverse impacts to safety, quality, project objectives, budget, or schedule). Examples include:

- Material or equipment, nonconforming or malfunctioning (nonconforming item).
- Documentation, errors, or omissions.

- Procedure or drawing, inadequate or incorrect.
- Personnel, unqualified personnel, or procedural noncompliance.
- Supplier defect, failure to meet procurement document requirements, including NIF Project-approved supplier documents.
- ES&H events, unexpected, significant, or regulatory noncompliance.

Problem Identification and Correction System (PICS)[3]—The computerized database to both implement and document Action Item Tracking / Problem Reporting. Edit routines prompt users through the workflow process, which is defined by the type of problem being reported and its impact. The system provides limited access for data entry and broad read-only access for monitoring by Project personnel.

Repair—A disposition action for restoring a nonconforming characteristic to a condition in which the functional reliability and safety of an item will be unimpaired even though the item will not conform to the original requirements. The Nonconformance Report (NCR) should include the authorized repair instructions and define the new acceptance criteria supported by the appropriate technical, cost, or schedule justification.

Rework—A disposition action by which a nonconforming item is made to conform to original requirements by completing or correcting the work. For example, rebuilding the item, rewriting the document, or repeating the activity until it meets the original acceptance criteria. This disposition can sometimes save time because it does not require extensive investigation or analysis by the Evaluation Team.

Root Cause—The underlying event or condition that if corrected, would prevent or minimize the probability of recurrence of a problem. Typical root causes might include the following:

- Lack of Management Support – schedules over quality, inaccurate scoping or work planning.
- Inadequate Design / Definition – impractical requirements or acceptance criteria.
- Lack of Discipline – procedural noncompliance.
- Lack of Training – procedure developed but staff is unaware of it.
- Lack of a System – quality policy not defined, organization infrastructure not developed.
- Lack of judgement – human error, worker fatigue.

Scrap—A disposition action required for a hardware item when it is established that the item is unusable or cannot be reworked or repaired. When the item is rejected, the disposition instructions should address verification and documentation that the item has been removed from the job site or has been tagged and segregated from conforming items so it cannot be inadvertently incorporated into work.

Scrap (make into)—A disposition action valid only for optical components in those situations in which a nonconforming optical blank can be made into another (acceptable) optical component.

Significance Level—A ranking assigned to a problem report (see definitions below) based upon the need for determination of cause, implementation of corrective measures to prevent recurrence, and the approvals required to close the report.

Level A—problems that could have a significant impact on health, safety environment, or other NIF Project performance objectives and which are serious enough to justify a written cause analysis, determination and implementation of measures to prevent recurrence, and follow-up verification of action taken. A significant condition can be an isolated, very serious occurrence or frequent, not-so-serious occurrences. The following are examples:

- Deficiencies in design, manufacturing, construction, or testing that require substantial rework, repair, or replacement.
- Damage to a system, structure, or component requiring substantial repairs.
- Error in an approved design that would potentially impact system performance and affect mission objectives.
- Event impacting the ability to achieve technical performance, operability, or reliability of the NIF.
- Violation of a regulatory agency (DOE, EPA, OSHA, etc.) requirement.

Level B—problems that either have a substantial impact on the NIF Project objectives; affect multiple systems, creating system interface coordination issues; apply to other products or processes beyond the specific deficiency or event; have the potential for repetition in subsequent units; or affect more than one user or department.

Level C—problems that have a minor impact on the NIF Project objectives and do not require extensive rework, repair, or replacement; do not have any system interface issues; do not have an impact beyond the specific occurrence reported; or do not materially affect the intended use of a product.

Specific Corrective Action—Action(s) implemented to correct the direct cause and the immediate effects of a detected problem or nonconformity.

Tracking Log—A list resulting from a query of the PICS database that identifies and reports the status of Action Items and Problem reports. This Log is a tool used by Project personnel to maintain awareness of issues that have potential for causing constraints—it is a list of items needing management visibility.

Use-As-Is—A disposition action permitted for a nonconforming item when it is established that the item is satisfactory for its intended use. The Evaluation Team has judged the deficiency to be minor, not presenting any significant violation of the original requirements.

Use w/Restriction—A disposition action permitted for a nonconforming item when it is established that the item can be expected to function reliably and safely only if its end-use is limited and controlled.

3. Responsibilities

Authority to perform assigned actions may be delegated to another qualified individual in the same organization, but the responsibility remains with the position named.

3.1 Problem Identifier

The problem identifier is responsible for the following:

- Initiating a PICS report and providing a description of the problem. For Supplier generated Material Nonconformance Reports and Deviation Requests, the Technical Representative or the Coordinator is responsible for entering the information into the PICS system.
- Identifying the governing requirements and assigning an initial level of significance.
- Notifying his/her supervisor of the problem.
- Assisting the Problem Owner or the Evaluation Team to resolve the problem.

3.2 Problem Owner

The Problem Owner is the chairperson of the Evaluation Team and is responsible for the following:

- Investigating the problem and identifying the cause(s).
- Determining the disposition of nonconforming material.
- Identifying the solution and corrective action(s) to resolve the problem.
- Presenting the investigation results, the recommended disposition of the nonconforming material and the corrective action plan to the MRB team for their review and concurrence (see **NIF Procedure 3.4, Material Review Board Process**).[4]
- Ensuring all disposition actions have been completed and corrective actions have been implemented.

3.3 Evaluation Team

The Evaluation Team includes personnel who have a stake in the resolution of the problem or who have expertise in issues related to the problem and its resolution. For problems other than nonconforming material, the Evaluation Team has the responsibility to assist the Problem Owner by:

- Investigating the problem and identifying the causes for Level A and B problems.
- Determining the appropriate solution and corrective actions.
- Verifying the corrective actions have been implemented.

3.4 Quality Assurance

Quality Assurance (QA) is responsible for providing a representative for all problem reports and is responsible for the following:

- Assisting the Problem Identifiers to capture the problem supporting data.
- Helping facilitate the investigation and problem resolution to assure the corrective action(s) is appropriate.
- Assisting the Problem Owner in determining whether a Stop Work action is appropriate.
- Reviewing and approving the material dispositions and corrective actions implemented.
- Ensuring that the Evaluation Team follows the MRB process.

3.5 Product Line Technical Representative

The Product Line Technical Representative is included as a Member of the Evaluation Team for both NCRs and Deviation Requests and is responsible for:

- Resolving material nonconformances and Requests for Deviation.
- Providing information to assist in determining disposition of material nonconformances by the MRB.
- Investigating material nonconformances to determine the cause(s) and corrective action(s).
- Serving as a member of the Evaluation Team for other problem categories.

3.6 Material Review Board[4]

The Material Review Board (MRB Team) is a group of technical experts that review the disposition of nonconforming material and either concur or provide advice to assure the corrective action and material disposition are reasonable and appropriate. The MRB Team is responsible for:

- Providing information regarding the flow-down of technical requirements and risk/schedule concerns to assist in determining proper disposition of material nonconformances.
- Concurring that the disposition selected for material nonconformances is consistent with the next assembly fit, function, or interchangeability requirements.
- Facilitating the problem resolution process by ensuring the Project's interface requirements and technical issues are identified and properly addressed during the cause analysis investigation and corrective action determination.

3.7 Area Integration Team (AIT) Leader[4]

The AIT Leader is responsible for the following:

- Initiating an MRB review for specified problem reports upon being informed of the need.
- Chairing the MRB review process.
- Providing final review and concurrence to the MRB conclusions and forwarding the information to the Responsible Manager.

3.8 Responsible Managers (Deputy Project Managers, Project Step Managers, Associate Project Managers/Product, and Product Line Managers)

A generic term for the person whose organization is responsible for the investigation and resolution of the problem. The Responsible Manager is responsible for the following:

- Concurring with the Level of Significance assigned to a problem.
- Assigning Problem Owners and QA Representatives to evaluate the problem.
- Forming the Evaluation Team for Level A & B problem reports.
- For all nonconforming material reports, determining if an MRB review is required based on the significance and impact of the nonconformance (see **NIF Procedure 3.4, Material Review Board Process**).[4]

- Assuring the MRB process is coordinated and any open issues and actions are addressed prior to authorizing the material disposition activity.
- Reviewing and authorizing the material disposition activity.
- Reviewing and approving the corrective action(s) implemented.

3.9 Subcontract Administrator/Coordinator

The Subcontract Administrator / Coordinator is responsible for the following:

- Receiving deviation requests and material nonconformance information from subcontractors and forwarding the information to the applicable Project personnel.
- Providing to the subcontractor the material disposition instructions as noted on the PICS problem reports.
- Identifying the cost and schedule impact from the subcontractor for those nonconforming items accepted for use by the Project.
- Maintaining the supporting documentation describing the nonconformance and the material disposition activity.

3.10 Responsible Supervisor

A generic term for the person to whom the problem identifier reports in the Project organization chart. The problem identifier's supervisor is responsible for the following:

- Reviewing both the level of significance and the problem description.
- Reviewing whether the problem affects other groups.
- Notifying the responsible Product Line Manager of the problem.

4. Procedure

This process for identifying problems and determining appropriate corrective actions is implemented using the PICS.[3,5] The specific workflow process is based on the type of problem reported and the significance level assigned to the problem. The major steps of the Problem Reporting process and the Nonconforming Material Disposition process are illustrated in **Attachments A1—NIF PICS Nonconformance and Deviation Reporting** and **A2—NIF PICS Problem Reporting.** The sequential action steps are described in this section, with the individual responsible for the action highlighted in *italic*.

See **Attachment B—Significance Level Requirements** for instructions on how to determine the overall impact of a problem and the resulting cause analysis required, the corrective actions to be implemented, and the approval authority necessary to close a problem report.

See **Attachment C—Connecting To and Using PICS** for instructions for connecting to and using the PICS database. Edit routines within the PICS software identify and prompt users to supply mandatory information.

The process is not intended to manage routine or planned tasks contained in the integrated NIF Integrated Project Schedule[6] or the ICF Program Technical Contract. This work is tracked and

reported by other means such as the standard reporting system. However, if delinquent or forecast to be delinquent, these tasks may be documented in PICS problem reports according to this procedure.

Serious deficiencies or discrepancies identified in design reviews, procurement reviews, management prestart reviews or other evaluations of in-progress documentation are recorded per their applicable procedures.[7,8,9] Any open item that is unresolved at the end of the review becomes a PICS Action Item and is documented per **NIF Procedure 1.8, Action Item Tracking**.[5] Problems identified in approved documents and work activities, such as those used for procurement, fabrication, installation, and testing, are documented in PICS problem reports according to this procedure.

4.1 Identifying a Problem

Any person working on the NIF Project may identify a problem affecting the Project.

Note: If a supplier or subcontractor requests the Project to accept nonconforming items or to approve a deviation request, the individual who receives the request for disposition (typically, the Technical Representative or the Coordinator) shall also initiate the PICS problem report.

When a problem is identified, the *Problem Identifier* shall document the problem by initiating a report in the PICS database. The *Problem Identifier* shall identify deficiencies in hardware, software, process, and documentation identified through inspections, Acceptance or Operational Tests, audits, reviews, or other activities. The following information needs to be entered into the PICS database:

- Problem record number (automatically entered by PICS).
- Occurrence date.
- Category of problem (Material Nonconformance, Assessment Finding, Design Inadequate, Material Deviation, ES&H Event, Documentation Error, Software Error, Procedural Noncompliance, Hardware Operation).
- Report title (brief description of the problem).
- Description of Problem and Requirement (summary of the problem and the deviation from the specified requirements, including what happened and why it happened).
- NIF Work Breakdown Structure (NWBS) number (select from pull-down menu).
- NIF Steps (select from a pull-down menu).
- Name of Responsible Manager.
- Level of Significance (Note: the significance level may be changed upon subsequent evaluation).
- Names of other personnel or team members who should be informed of the problem.

For Material Nonconformance reports and Deviation requests, the *Problem Identifier* must also enter the following information:

- Affected part number, revision number and part name (if not entered by PICS).
- Quantity of units affected or rejected.
- Serial number of the rejected item(s).

- Supplier's name and Purchase Order number.

After this information is entered, the Responsible Manager shall be notified of the above information. If the Responsible Manager is not known, the *Problem Identifier* may notify his / her *Supervisor*, who shall determine the Responsible Manager and enter his / her name. The PICS system automatically notifies either the Manager or the Supervisor by electronic mail when his / her name is entered in the database.

4.2 Control of Nonconforming Material

The *Problem Identifier* shall mark or tag nonconforming items or material with a red identification tag that is legible and easily recognizable (see **Attachment D—Nonconforming Material and Restricted-Use Material Tags**). If practical, nonconforming items are to be segregated by placing them in a clearly identified and designated holding area until properly dispositioned. When segregation is impractical or impossible because of physical conditions, such as size, weight, or access limitations, other precautions (e.g., marking, tagging) shall be taken to preclude inadvertent use of a nonconforming item. Items or their containers should be tagged (using Attachment D) in a manner to ensure the tags are securely attached to avoid loss during handling. Tagging should not adversely affect the end use of the item. Any further processing, delivery, installation, or use of a nonconforming item shall be controlled pending completion of an evaluation and an approved disposition.

4.3 Problem Evaluation

4.3.1 Review Significance Level

The *Responsible Manager* shall review the initial significance level assigned to a problem report, and he / she may revise the level of significance (A, B, or C). If the problem warrants the need for root cause analysis and preventative corrective action, then he / she shall assign either a Level A or B significance. This determination requires judgement as to the overall impact of the problem on the NIF Project's cost, schedule, or performance objectives. It also defines the subsequent cause analysis required and the approval authority necessary for disposition and implementation of corrective actions (see Attachment B).

4.3.2 Assign an Evaluation Team

For Level C problems, the *Responsible Manager* shall assign both a Problem Owner and a QA representative to evaluate the problem and shall identify them in the PICS database. The evaluation team shall consist of (as a minimum) the Problem Identifier, the Problem Owner and a QA representative.

For Level A or B problems, the *Responsible Manager* shall assign a team of individuals to evaluate the problem, including the Problem Owner and the QA representative. The team members shall include other personnel who have a stake in the resolution of the problem or who have expertise in issues related to the problem and its resolution. For example, a Subcontract Administrator shall be included if the problem is related to supplier activities. The names of the problem evaluation team members shall be entered in the problem report database.

4.3.3 MRB Determination

Upon receipt of a Deviation Request or a Nonconforming Material report, the *Responsible Manager* shall consider whether the nonconforming material or its disposition could affect the next assembly fit, function, or interchangeability requirements or the Project's performance objectives. Based on the significance and impact of the nonconformance, the *Responsible Manager* shall determine if a formal MRB review is required. If so, he or she shall initiate the MRB process per **NIF Procedure 3.4, Material Review Board Process**. The names of the AIT Leader and the next assembly Product Line Manager shall be entered as team members in the problem report database for notification.

4.3.4 Stop Work Action—Yes/No

The *Problem Owner* and *QA Engineer* shall determine whether or not the work involved must be stopped or otherwise controlled until corrective action is implemented. If work must be stopped, the *Problem Owner* shall note the Stop Work Action on the problem report and initiate a Stop Work Order (SWO).[10] If a contractor is involved with the activity, the *Problem Owner* shall notify the *Subcontract Administrator,* who shall forward the SWO to the supplier.

4.3.5 Cause Analysis

For Level C problems, the *Problem Owner* shall investigate the problem to determine its direct cause. The direct cause of the problem shall be entered in the problem report database. For Level A or B problems, the *Evaluation Team* shall investigate the problem to determine its direct, contributory, and root cause(s). The causes of the problem shall be entered in the problem report database. The *Problem Owner* or the *Evaluation Team* may identify other Project personnel or stakeholders to help investigate and determine the problem causes. Their names and any assigned actions shall be entered in the problem report database.

4.3.6 Disposition of Nonconforming Material

Upon receipt of a deviation request or a nonconformance report, the *Problem Owner* shall review the nonconformance information and determine the material disposition with the assistance of the *Evaluation Team*.

For dispositions of nonconforming items, the following applies:

- The nonconformance is adequately identified and described in the problem report.
- Nonconforming items are dispositioned as either use-as-is, repair, rework, use w/restriction, scrap, return to vendor, or scrap/make into.
- For "rework," the disposition shall reference approved design documents, procedures, plans and/or work orders to be used to correct the nonconforming condition. The technical details for correction of the nonconforming condition shall be adequate for the disposition.
- For "repair," the disposition shall comply with the item's basic design requirements and/or indicate changes to existing design documents needed to correct the nonconforming condition. Specific repair instructions should be provided in the problem report.
- Items that do not meet original design requirements and are dispositioned "use-as-is," "repair," or "use w/restriction" shall include a technical justification by a person with engineering design responsibility.

- If changes to the specifying document are required to reflect the as-built condition, then the disposition shall require action to change the design document to reflect the accepted nonconformance.[11] The Engineering Change Order (ECO) number shall be included in the problem report.

Note: When the disposition selected is either "use w/restriction" or "scrap," the material inventory management database (Glovia) shall be updated (see Section 4.8) to include the disposition instructions to ensure that the item is not inadvertently used.

The *Evaluation Team* shall record the justification for the disposition selected and any rework, repair, or other instructions in the problem report.

If the disposition selected is "use w/restriction," the red nonconforming tag shall be replaced with a yellow "Restricted Use" tag that is legible and easily recognizable (see Attachment D). Items or their containers should be tagged in a manner to ensure the yellow tags are securely attached to avoid loss during handling.

4.4 Determine Corrective Action

For all problem reports, the *Problem Owner* and the *Evaluation Team* (if assigned) shall determine the specific corrective action(s) to resolve the problem and identify any other personnel or Performing Organization responsible for implementation of such actions.

For Level A and B problems (see Section 4.3.1) requiring a root cause analysis, the *Evaluation Team* shall determine not only the specific corrective action(s) to resolve the particular problem, but also the corrective action(s) necessary to prevent recurrence. The corrective actions must address both the root and contributing causes of the problem. Personnel from other organizations who are responsible for implementing the corrective actions shall be added to the problem Evaluation Team and their names entered in the problem report database. The *QA Representative* will assist in the analysis and documentation of the corrective actions in the problem report.

4.5 MRB Action

The *Responsible Manager* shall arrange for the Problem Owner to present the results of the investigation, the recommended disposition, and the corrective action plan to the MRB team for their review and concurrence.

Per **NIF Procedure 3.4**, the MRB must review and concur with the disposition and corrective actions prior to the Problem Owner initiating any implementation actions.

The *AIT Leader* shall concur with the MRB action to assure that the disposition selected is consistent with the next assembly use requirements and the Project performance objectives.[4] The MRB results, including any additional supporting information and data describing the nonconformance, shall be provided to the Responsible Manager for data retention purposes.

The *Problem Owner* shall forward the problem report containing the nonconforming material disposition instructions to the Performing Organization. The *Problem Owner* shall coordinate with the Subcontract Administrator, as necessary, to implement the disposition and corrective action(s) by the supplier.

4.6 Verification

Evaluation Team members shall verify problem resolution and the implementation of all corrective actions by inspection, review, or other observation of the item, document, or activity. Nonconforming materials that are repaired or reworked shall be inspected to verify compliance with the approved disposition. Upon completion of the disposition and acceptance of the material, the red nonconformance tag shall be removed from the item or container.

An indication that each problem resolution and corrective action has been verified shall be entered in the problem report database by either the problem owner, QA representative, or another member of the Evaluation Team. If the problem report is not satisfactorily completed, the *Evaluation Team members* shall revise the problem report or initiate a new report to address the deficient condition.

4.7 Approval and Close Out

4.7.1 For Level A problems, the assigned problem owner, the QA Manager, and the responsible Associate Project Manager shall review the problem, cause(s), completed corrective actions and verifications entered in the PICS database, and approve the close out of the problem. Approval of the problem closeout shall be entered in the problem report database.

4.7.2 For Level B problems, the assigned problem owner, the QA representative, and the responsible Product Line Manager shall review the problem, causes(s), completed corrective actions, and verifications entered in the PICS database and approve the closeout of the problem. Approval of the problem closeout shall be entered in the problem report database.

4.7.3 For Level C problems, the assigned Problem Owner and the QA representative shall review the problem, cause(s), and completed corrective actions entered in the PICS database, and approve the closeout of the problem. Their approval of the problem closeout shall be entered in the problem report database.

4.8 Update Inventory Control

When the disposition is identified as either “use w/restriction” or “scrap” on a Nonconforming Material Report, the *Information Systems* database for inventory management (Glovia) shall be updated. The disposition, including the PICS record number, will be noted for each item, identified by part number, revision, and serial number, if serialized.

4.9 Reporting Status

Any person working on the NIF Project may request or print a standardized hardcopy problem report listing the information already entered into the PICS database. Or they may select data from the entire database, sort it, and generate their own status reports, activity tracking reports, or trend analysis reports. Custom summary reports shall include information such as the number of problem reports generated, in-work or closed, and shall be sorted by:

- Problem Report Category
- Significance Level
- Responsible Product Line Manager

- Problem Owner / Product Line Technical Representative

The *Manager, Quality Assurance* shall publish monthly summary reports for use in determining quality improvement areas. Repetitive or generic problems may be identified for further cause analysis and preventive corrective action.

5. References

1. Project Procedure 8.3, *Preparation and Standard Content for Commissioning Test Procedures.*
2. BIS Procedure 3.2, *BIS NCR Process*, NIF-0068149.
3. Memo; "System Requirements of the Action Tracking / Problem Reporting System," NIF-0037582.
4. Project Procedure 3.4, Material Review Board Procedure.
5. Project Procedure 1.8, Action Item Tracking.
6. Project Procedure 1.3, Schedule Preparation and Revision.
7. Project Procedure 5.1, Design Review.
8. Project Procedure 7.4, Procurement Planning, Scheduling, Review and Approval.
9. Project Procedure 9.3, Management Prestart Review.
10. Project Procedure 3.3, Stop Work Action.
11. Project Procedure 6.4, Engineering Change Requests / Orders.

6. Documents and Records

Documents and records shall be maintained as follows:

- Problem reports initiated and closed as a result of implementing this Procedure shall be maintained and stored (archived) in the PICS database server.
- Inspection data shall be retained as electronic files, by part # / serial # in the MDMS, or as hard copy files in the QA Library.
- Related documents shall by retained by document # in the PDMS .
- Signed hardcopies, not available on electronic media, shall be retained by the Document Control Center (QA Library).

7. Attachments

Attachment A1—Process Map, Nonconformance and Deviation Reporting
Attachment A2—Process Map, Problem Reporting
Attachment B—Reporting and Approval Requirements
Attachment C—Instruction for Connecting to and Using PICS
Attachment D—Nonconforming Material and Restricted-Use Material tags

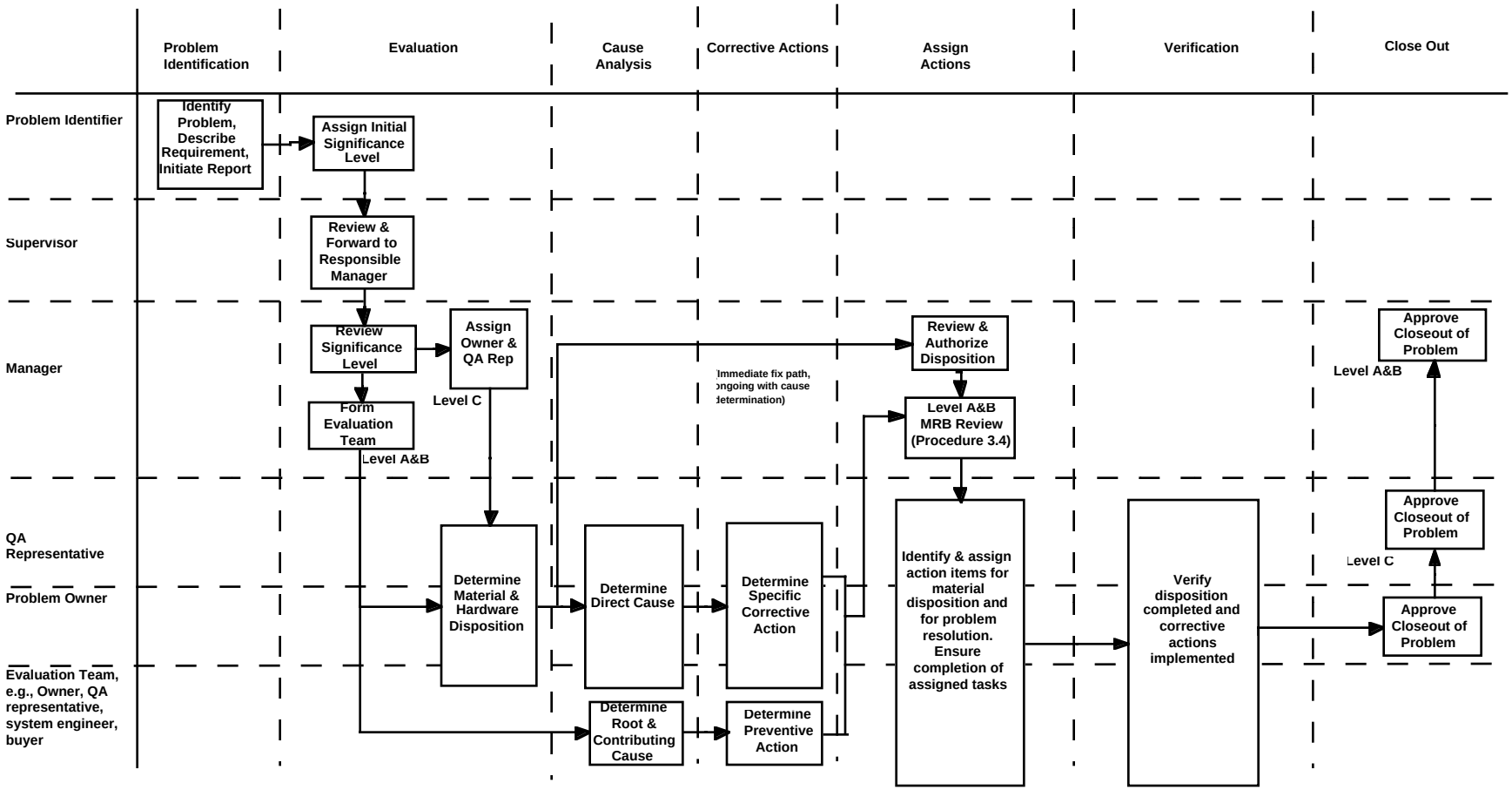
8. Reason for Revision

Revision 2 updates this procedure to reflect the revised Project organization and to incorporate the MRB Review process into the use of the Problem Identification and Correction System (PICS) database. Revision 2 is a complete rewrite, therefore vertical bars are not used to indicate changes.

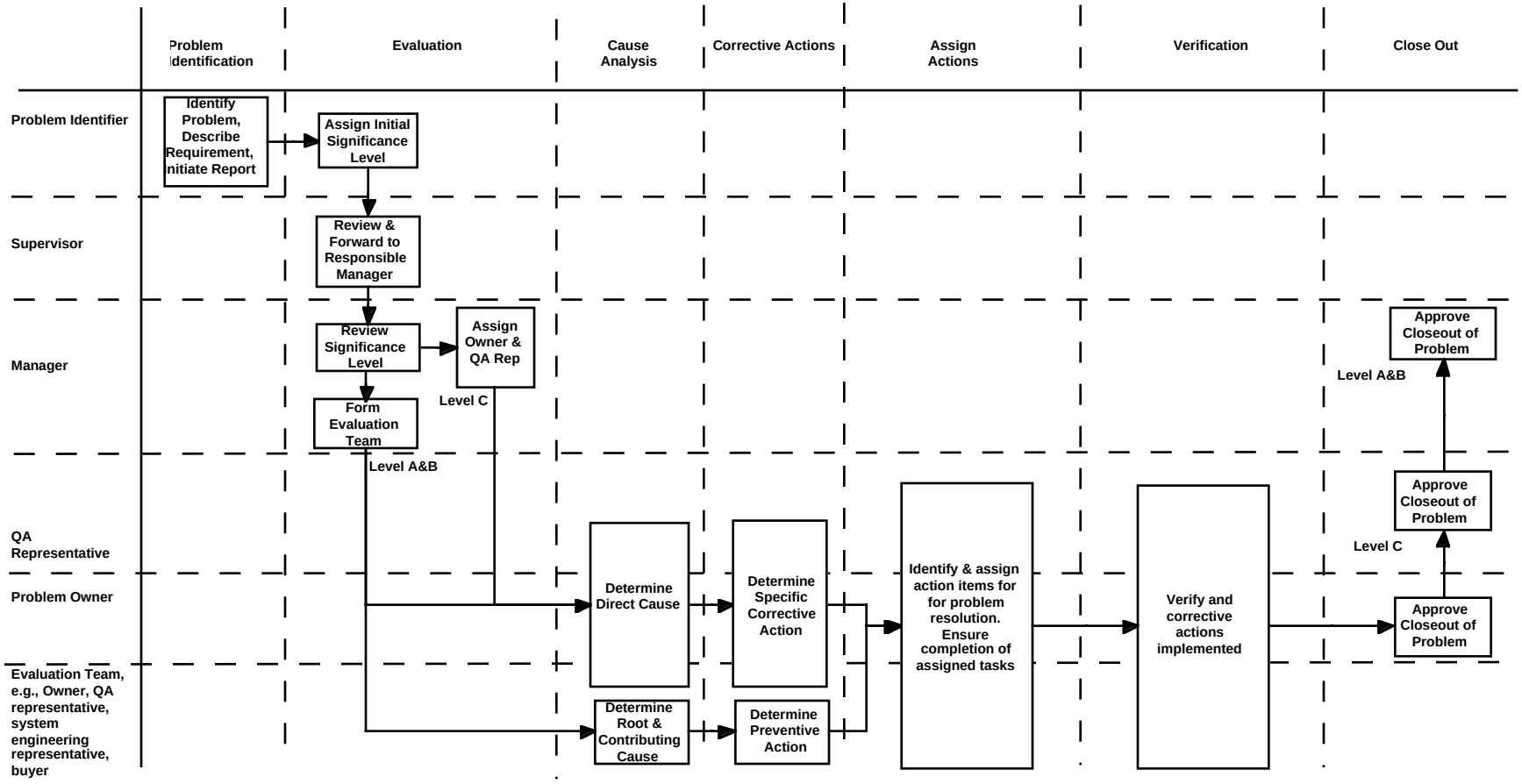
9. Signatures and Approval

	Daniel M. Pollo	11/5/01
Prepared by	Process Owner	Date
	Paul D. Weber	11/6/01
Concurred by	APM/Production	Date
	Derrol J. Hammer	11/6/01
Concurred by	Procurement Manager	Date
	Bernard T. Merritt	11/7/01
Concurred by	APM/Engineering	Date
	Richard G. Bee;er	11/7/01
Concurred by	System Engineering Manager	Date
	Sandra Brereton	11/6/01
Concurred by	ES&H Assurances Manager	Date
	Clarence Dun	11/8/01
Concurred by	Quality Assurance Manager	Date
	Jon Yatabe	11/8/01
Approved by	Deputy Project Manager/ Assurances	Date

NIF Problem Identification & Correction System (PICS)
Nonconformance & Deviation Reporting



NIF Problem Identification & Correction System (PICS)
Problem Reporting



Problem reporting

The National Ignition Facility

Impact of the problem determines the degree of oversight (management review) applied

Level	Impact	Analysis Required	Approved by:	Report to:
A	**Significant impact on ES&H or the project:** • **Personnel injured, equipment or facility infrastructure damaged** • **Requires extensive rework, repair or replacement** • **Impacts ability to achieve technical performance, operability or reliability requirements** • **Causes item to not perform its intended function** • **Violation of a regulatory agency requirement**	• **Root cause and preventive corrective action** • **Direct cause and specific corrective action**	• **Problem Owner** • **QA Manager** • **Responsible APM Manager**	• **Senior management** • **Evaluation team** • **Regulatory agency**
B	**Substantial impact on the project:** • **Affects multiple systems causing interface issues** • **Impact beyond the specific deficiency or event** • **Potential for repetition in subsequent units or systems** • **Affects more than 1 user or department**		• **Problem Owner** • **QA Engineer** • **Responsible Line Manager**	• **Senior management** • **Evaluation team**
C	**Minor impact on the project:** • **Requires limited rework, repair or replacement** • **No system interface issues** • **No impact beyond the specific occurrence**	• **Direct cause and specific corrective action**	• **Problem Owner** • **QA Engineer**	• **Evaluation team**

Instructions for Connecting to and Using PICS

The following information describes the process for connecting to and using the NIF-PICS computer system. The PICS system is a client-server database application that supports both Mac and Windows 95/98/NT clients. The PICS database is included in the "4D Client" software application, which should be installed on your computer.

PICS is essentially a computerized blank form used as a tool for reporting nonconforming material and other problems and also used for tracking project action items. The PICS system's computer software does not enforce procedural requirements but it was designed to be self-explanatory. However, a copy of the NIF-PICS User Guide is available to Mac and Windows users on the NIF IS web page at the following path:

https://nif-is.llnl.gov/pics/pics_dl.htm

Connecting to PICS

Mac OS

1. After you launch the 4D Client application, an "Open Tpt TCP PPC" dialog will be displayed, listing available 4D Data Servers.
2. Select <NIF PICS> in the list and click OK or double-click on<NIF PICS> to connect to the 4D server.
3. If <NIF PICS> is not displayed in the list, click on the "LOCK" icon in the upper right corner to expand the window choices.

Windows

1. Launch 4D Client, located in either the Windows Start menu under \Programs\ACI or on your desktop
2. The 4D Network Component window will be displayed, listing available 4D Data Servers
3. Double-click on <NIF PICS> in the list to connect to the 4D server.
4. If <NIF PICS> is not displayed in the list, click on the "More Choices" button to expand the window choices.

Login

When the login screen is displayed, enter your User ID (which is your employee number) and your password, which is initially set to your User ID, and click OK.

After successfully logging into PICS for the first time, you should change your password to a secure password that complies with LLNL security standards. To change your password, use the <Change Password> command in the "File" menu.

Using PICS

You can either add new Action Items or Problem Reports or you can search existing Records by selecting the applicable menu option on the PICS main menu screen.

Reporting a Problem or Material Nonconformance
To report a new problem, select <New Problem> from the PICS main menu. The PICS computerized form will open and you can enter the applicable information on the multiple data screens.

Initiating an Action Item
An Action Item may be initiated by those PICS users identified as managers on the project organization chart. To initiate an Action Item, select <New Action Item> from the PICS main menu. The PICS computerized form will open and the manager can enter the applicable information on the data screen.

Searching the Data
When you select <Search> from the main menu, a search report form will open allowing you to select report records based on the criteria you can specify. If you would like to select all of the records, click the <Search> button or press the <Return> or <Enter> key without entering any search criteria.

After a search is performed, the resulting selection of records is displayed in a List window. To view all of the data for a given record, highlight the record and double-click to open it and display the data screens.

When searching, records are only displayed if they meet a TRUE condition for ALL of the search criteria you specify. For example, if you select a Status of <In Work>, a Significance level of <B> and a Category of <Material Nonconformance>, only those records that are “In Work” AND have a Significance level of “B” AND have a Category of “Material Nonconformance”, are displayed in the List window.

PICS Suggestions
To submit a suggestion to improve the PICS system or to report a system ‘bug’, use the “PICS Suggestion” command located in the “File” menu.

DO NOT USE

PICS #

Item/Part Number

Item/Part Name

AFFECTED

No. of Packages	Quantity	Serial #

Originator

Date

RESTRICTED USE

PICS #

Item/Part Number

Item/Part Name

AFFECTED

No. of Packages	Quantity	Serial #

Originator

Date